MDOT
Michigan Department of Transportation

ENGINEERING OPERATIONS COMMITTEE
MEETING MINUTES
DECEMBER 6, 2000 - 9:00 A.M.
EXECUTIVE CONFERENCE ROOM

Present:	C. T. Maki	C. Roberts	P. F. Miller
	T. E. Davies	J. W. Reincke	T. Fudaly
Guests:	D. Smiley	K. Kennedy	J. LaVoy
	C. Bleech	B. Stonebrook	T. Myers

OLD BUSINESS

1. **Approval of the Minutes of the November 7, 2000, Meeting - C. T. Maki**

Minutes of the November 7, 2000, meeting were approved as written.

2. **Thompson Scholar Research Projects - J. D. Culp**

Six problem statements were recently submitted by MSU as potential candidate projects for the Thompson Scholar Program in accordance with the directions set by EOC in November for reviewing and accepting projects under this program. Master's students will be working on asphalt paving research problems to fulfill their degree requirements. The submitted statements were reviewed by area experts to determine interest, critical need, and how they fit into either the Five Year Plan for pavement research or the research strategic direction.

One suggested topic, "Identify the Causes of Top-Down Cracking of Asphalt Pavements", was determined to be a credible problem statement since it is an extension of the current rubblization research. More detail is needed and will be provided through development of the full research proposal and work within the assigned research advisory panel. MSU has a master's candidate available for this work. It was noted that the project will also include department assistance and staff time. The costs presented do not reflect MDOT expenditures, which should be charged to this research. The project is recommended for EOC approval and funding.

Another topic having some merit was "Asphalt Mix Attributes Affecting Pavement Performance". The problem statement needs more expansion and clarification. Staff will continue to work with MSU on its development before it is presented to EOC for review and approval. The other four problem areas were either deferred or have no merit.

As noted in the November minutes, projects under this program will need a funding source. The SPR program has a prioritized backlog of more than 30 unfunded research initiatives developed under the Five Year Plan or as a result of the October Research Summit meeting.

ACTION: The problem, "Identify the Causes of Top-Down Cracking in Asphalt Pavements", is valid for research development. Tom Maki will look into resolving the funding source.

NEW BUSINESS

1. **Cold-in-Place Recycling Candidate - S. Bower**

In accordance with previous EOC direction, a cold-in-place recycling project is being proposed by the North Region. The project is on M-65 (CS 35012; JN 50719) from M-55 to North Esmond Road in Iosco County. The experimental project is a new rehabilitation fix and will help determine what constructability issues may occur compared to asphalt crushing, shaping and resurfacing. The performance of this technique will be compared to a crush and shape and resurfacing project on M-65 in Alcona County. The region has developed a monitoring plan to evaluate and measure the performance of the rehabilitation fix and to determine the potential for cost savings.

ACTION: The proposed rehabilitation project is approved. The North Region will proceed with project development.

2. **Pavement Selection US-127 Reconstruction: CS 38111, JN 43497 - K. Kennedy**

The reconstruction alternates considered were a flexible bituminous pavement (Alternate 1), and a jointed plain concrete pavement (Alternate 2). Portions of the project require the existing subbase be replaced due to grade changes and bridge approaches.

A life cycle cost analysis was performed and Alternate 2 was approved based on having the lowest Equivalent Uniform Annual Cost. The pavement design and cost analysis summary are as follows:

Alternate 2A Reconstruction: Jointed Plain Concrete Pavement (Existing Subbase Remains) (55 Percent of Job)

240mm . . . . . Jointed Plain Concrete Pavement (Mainline)(4.5 m jt spacing)
Freeway Shoulder Option
100mm . . . . . Open Graded Drainage Course
Geotextile Separator
150mm . . . . . Open Graded Underdrains
305mm . . . . . Existing Subbase
645mm . . . . . Total Thickness

Alternate 2B Reconstruction: Jointed Plain Concrete Pavement (Grade Raise) (15 Percent of Job)

240mm . . . . . Jointed Plain Concrete Pavement (Mainline) (4.5 m jt spacing) Freeway Shoulder Option
100mm . . . . . Open Graded Drainage Course Geotextile Separator
150mm . . . . . Open Graded Underdrains
182mm . . . . . Sand Subbase
305mm . . . . . Ex. Subbase
827mm . . . . . Total Thickness

Alternate 2C Reconstruction: Jointed Plain Concrete Pavement (Existing Subbase Replaced) (30 Percent of Job)

240mm . . . . . Jointed Plain Concrete Pavement (Mainline) (4.5 m jt spacing) Freeway Shoulder Option
100mm . . . . . Open Graded Drainage Course Geotextile Separator
150mm . . . . . Open Graded Underdrains
300mm . . . . . Sand Subbase
640mm . . . . . Total Thickness

Present Value Initial Construction Costs . . . . . $330,584/dir. km (Composite Cost of 2A, 2B, & 2C)
Present Value Initial User Costs . . . . . $59,738/dir. km
Present Value Maintenance Costs . . . . . $59,840/dir. km

Equivalent Uniform Annual Cost $28,189/kilometer

3. **Design Division Guidance Documents - B. Stonebrook**

Eight former operating instructions have been updated to the new guidance document format, some with minor revisions. The following are recommended for approval:

A. Relocation of Municipally Owned Utilities
B. Distribution of Cost-Municipally Owned Utilities
C. Participation Agreements With Municipalities and Private Entities
D. Disbursement of State Grant Funds Policy
E. Contract Documents Policy
F. Regulation of Municipally Owned Utilities
G. Pedestrian Bridges/Tunnels

ACTION: The new guidance documents are approved and will be signed by Gary Taylor.

(Signed Copy on File at C&T/Secondary)
Jon W. Reincke, Secretary
Engineering Operations Committee

JWR:kat

Attachments

cc: EOC Members
Region Engineers

J. R. DeSana	R. J. Risser, Jr. (MCPA)	L. Stornant	T. L. Nelson
R. J. Lippert, Jr.	A. C. Milo (MRBA)	J. Ruszkowski	R. D. Till
D. L. Smiley	J. Becsey (MAPA)	C. Libiran	M. Frierson
M. Nystrom (AUC)	D. Hollingsworth (MCA)	G. J. Bukoski	C. W. Whiteside
M. Newman (MAA)	J. Steele (FHWA)	K. Rothwell	T. E. Myers
J. Murner (MRPA)			